The Future of Professional I/O

AJA VIDEO SYSTEMS

Because it matters.®

AJA's Io family of devices bring desktop I/O power to a portable size and shape. Move between desktop and mobile, Mac and Windows with a single device that has all the power and functionality your work requires.

The Future of Professional I/O

The Io family delivers powerful workflows in a compact form, bringing flexible I/O and high performance to any compatible workstation or laptop.

The needs of video professionals continue to evolve. The ability to run full-featured software on laptops and smaller form-factor computers as well as the growing needs of streaming applications, on-set functionality and the move to 4K, all create a tremendous need for compact video and audio I/O solutions. AJA answers that call with a range of products that provide desktop-level functionality in a portable form factor that's powerful enough to deliver in the edit suite, and sturdy enough to handle life in the field.

Housed in a rugged chassis, Io devices are small and light enough to carry in a backpack along with a laptop, providing fully functional systems without having to transport large racks of additional gear. All Io devices are compatible with PC or Mac, offering you the flexibility to work on any platform, in the software of your choice.
The Io family is built to the exacting standards of all AJA hardware and backed by our world-class support network, 3-year international warranty and advanced exchange service.

Extend your portable power with high quality 4K, UHD, 2K and HD I/O powered by Thunderbolt 2 technology.

Maximum 4K Performance.

Io 4K is the next evolution of capture and output hardware offering a full set of professional video and audio connectivity with support for the latest 4K and UltraHD devices. The power of Thunderbolt 2 enables Io 4K to handle a wide range of formats from SD to HD, UltraHD and full 4K over both SDI and HDMI with High Frame Rate (HFR) support up to 60p.

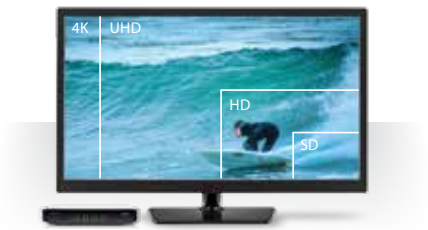
The dual Thunderbolt 2 ports on Io 4K allow you to daisy chain additional peripherals such as high-resolution displays and high-capacity storage with plenty of flexibility.

Io 4K's elegant, aluminum construction is strong enough to survive the rigors of life in the field, while looking beautiful in your edit suite. Io 4K seamlessly integrates with leading post-production and delivery tools from Apple, Adobe, Avid, Autodesk, Telestream and many more.

Professional connectivity

The latest Thunderbolt 2 technology allows even greater bandwidth between host computer systems and properly engineered Thunderbolt devices. AJA's Io 4K takes full advantage of this improved throughput to allow capture and output of video signals from SD to 4K and everything in between.

Io 4K supports 4K, UltraHD, 3G-SDI, Dual Link, HD-SDI and SD-SDI as well as UHD and HD over HDMI 1.4a for both capture and output. A dedicated, real time, always-on HD-SDI output allows Io 4K to simultaneously output to HD monitors when working at 4K or UHD resolutions, providing cost-effective monitoring options in addition to full resolution outputs.



Futureproof

With more affordable high-resolution cameras available, many productions are opting to shoot at a higher resolution even if final delivery is still in SD or HD. This offers the flexibility to re-master at higher resolutions in the future.

Io 4K supports your current SD and HD workflows and provides a path to move to higher resolution productions whenever the need arises. The real time down-converter also means you can work at higher resolutions and easily create lower resolution deliverables without the need to recapture or re-edit – all at a size that's easy to take on-set or in the field.

Powerful

Thunderbolt 2 technology increases the available bandwidth that can be carried on a single Thunderbolt cable. Io 4K capitalizes on this increased capacity to allow up to 4K signals to be captured and output.

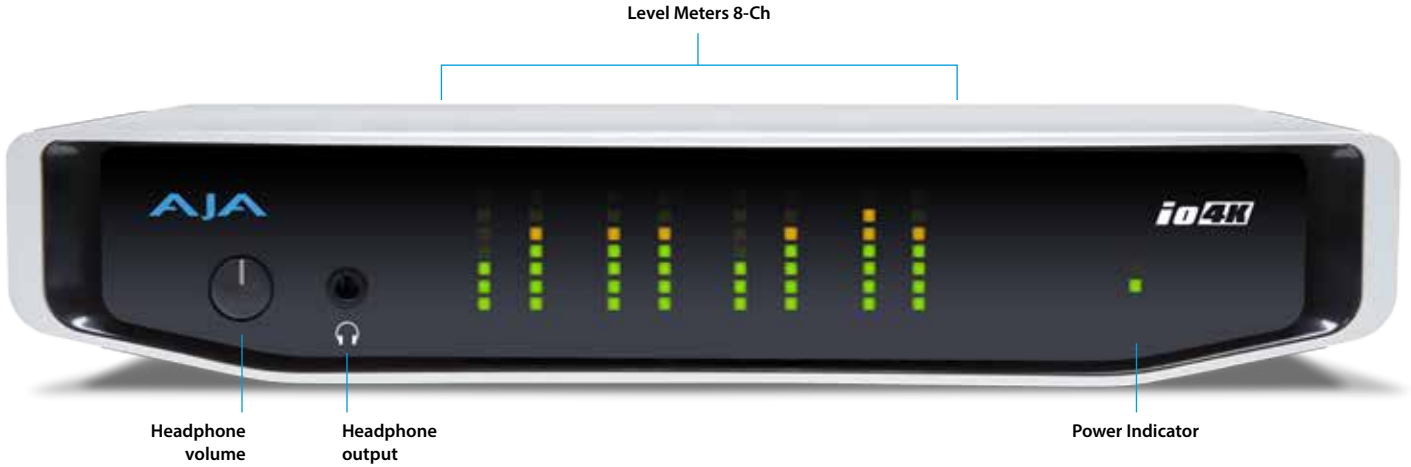
With dual Thunderbolt 2 ports, Io 4K can daisy chain additional devices together such as high-resolution displays and high-capacity storage for a complete, portable solution that's powerful enough to meet the demands of professional production.

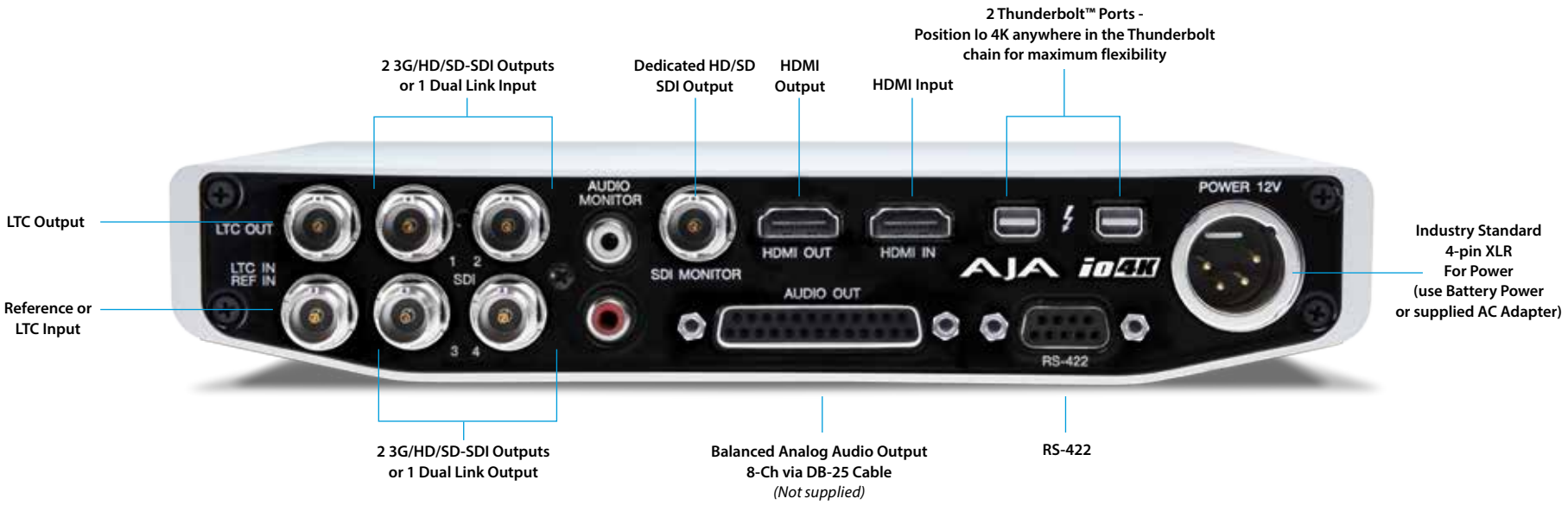
Compatible

AJA's industry-proven drivers and application plug-ins provide tight integration with leading post- production and delivery tools such as Apple Final Cut Pro X, Adobe Creative Cloud, AJA Control Room, Telestream Wirecast 5 and more.

Io 4K gives you the flexibility to use the software tools that are appropriate for your workflow while maintaining consistent, high-quality hardware capture and output that's ideal for your workflows now and into the future.

Connections

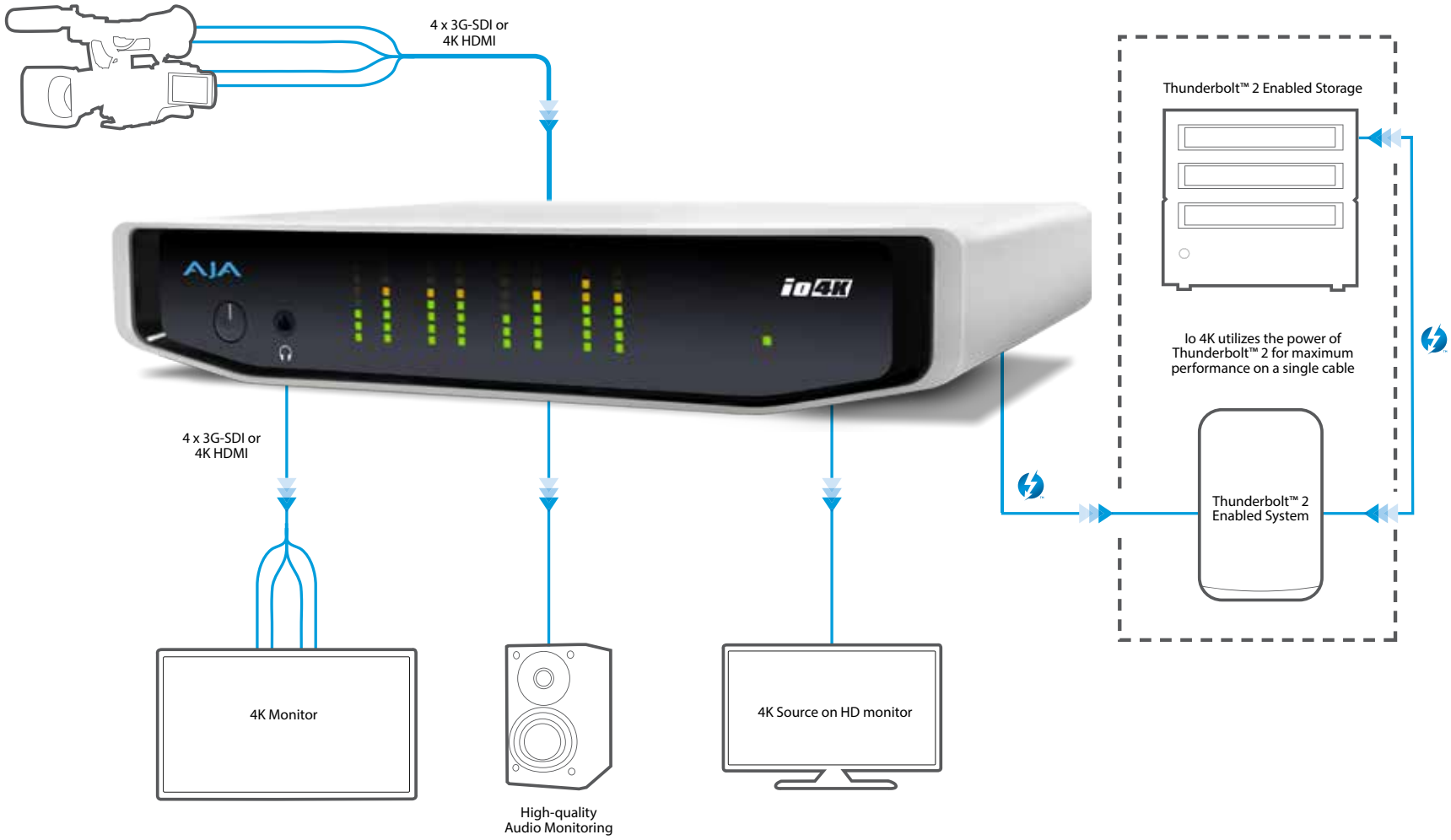



2 Thunderbolt™ Ports - Position Io 4K anywhere in the Thunderbolt chain for maximum flexibility
2 3G/HD/SD-SDI Outputs or 1 Dual Link Input
Dedicated HD/SD SDI Output
HDMI Output
HDMI Input
LTC Output
Reference or LTC Input
Industry Standard 4-pin XLR For Power (use Battery Power or supplied AC Adapter)
2 3G/HD/SD-SDI Outputs or 1 Dual Link Output
Balanced Analog Audio Output 8-Ch via DB-25 Cable (Not supplied)
RS-422
LTC OUT
LTC IN REF IN
SDI
AUDIO MONITOR
SDI MONITOR
HDMI OUT
HDMI IN
AUDIO OUT
POWER 12V
RS-422

Click here For the most recent product specifications visit www.aja.com/en/products/io-4k/#techspecs

Workflow

Thunderbolt™-enabled workflow



Tech Specs

Video Formats

SD
- 525i 29.97
- 625i 25

HD
- 720P 50, 59.94, 60
- 1080i 50, 59.94, 60
- 1080PsF 23.98, 24, 25, 29.97, 30
- 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60

2K
- 2048 x 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 2048 x 1080PsF 23.98, 24, 25, 29.97, 30

4K
- 3840 x 2160P 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 3840 x 2160PsF 23.98, 24, 25
- 4096 x 2160P 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 4096 x 2160PsF 23.98, 24, 25

Video Inputs

- 3G-SDI, SMPTE-259/292/296/424, 8- or 10-bits
- Single Link 4:2:2 or 4:4:4 (1 x BNC)
- Dual Link HD 4:4:4 (2 x BNC)
- 2K HSDL (High Speed Data Link) 4:4:4, (2 x BNC)
- 4K/UltraHD 4:4:4 (4 x BNC)
- HDMI v2.0b
  - 30/36 bits/pixel, RGB or YUV, 2.25Gbps.
  - SD, HD, 2K and stereoscopic HD support, UHD with HFR support up to 60p 4:2:0

Video Outputs

- 3G/SD/HD SDI, SMPTE-259/292/296/424, 8 -or 10-bits
- Single Link 4:2:2 or 4:4:4 (1 x BNC)
- Dual Link HD 4:4:4 (2 x BNC)
- 2K HSDL (High Speed Data Link) 4:4:4, (2 x BNC)
- 4K/QuadHD 4:4:4 (4 x BNC)
- HDMI v1.4
  - 30/36 bits/pixel, RGB or YUV, 2.25Gbps.
  - SD, HD, 1080p-50/60, 4K, 2K and stereoscopic HD support

Audio Input Digital

- 16-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

Audio Output Digital

- 16-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

Audio Output Analog

- 8-channel, 24-bit D/A analog audio, 48kHz sample rate, balanced (via 8 x XLR on DB-25 breakout cable)
- +24dbu Full Scale Digital (0dbFS)
- +/- 0.2db 20 to 20kHz Frequency Response

Downstream Keyer

- Supports graphics with alpha channel over video, matte or framebuffer, or framebuffer content over incoming video or matte.

4K/UHD Down-Conversion

- Real time, dedicated 4K down-conversion output (1 x BNC)
- 4K to 2K down-conversion
- UltraHD to HD down-conversion

Reference and LTC I/O

- 1x BNC LTC Output
- 1 x BNC assignable to Reference video or LTC input

Reference:
- Analog Color Black (1V) or Composite Sync (2 or 4V)
- Non-terminating

Physical

- Interface: Thunderbolt 2 (2 x)
- Power: 10-20V, 30-60W*

** Note: Nominal power is 30W. However, multiple connected Thunderbolt devices may place additional power demands on Io 4K, which could increase the power draw to 60W.*

Machine Control

- RS-422, Sony 9-pin protocol
- 9-pin D-connector pinout is as follows:

1	GND
2	RX-
3	TX+
4	GND
5	No Collection
6	GND
7	RX+
8	TX-
9	GND
Shell	GND

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ioXT

Only **$1,495** US MSRP*

Find a Reseller

Turn any Thunderbolt-enabled system into a professional editing station for uncompressed HD and SD 4:2:2 and 4:4:4 workflows.

Harness the Power of Thunderbolt™

Get desktop-level performance and laptop-level portability without compromise.

The newest generation of computers feature powerful Thunderbolt interfaces, offering a mind-blowing 10Gbps available bandwidth. Taking advantage of this new interface, Io XT is the ideal portable companion for lightning-fast video capture and playback for professional post production and on set applications.

Compact, portable and powerful, Io XT is loaded with high-end features including 3G/Dual Link/HD/SD-SDI, Component Analog, and HDMI connectivity, to bring true desktop-level power to any Thunderbolt™-enabled system, with full uncompressed HD and SD 4:2:2 and 4:4:4 capable video and audio connectivity.

Io XT connects with a single Thunderbolt cable and provides a second Thunderbolt connector for daisy-chaining other Thunderbolt devices, such as storage, making it ideal for use on-set or in the edit suite.

Designed for today's workflows, Io XT provides complete compatibility with the most popular NLE programs, the newest codecs, video formats, stereoscopic 3D workflows, and more. Io XT also includes AJA's industry-best drivers and application plug-ins for integrated workflows with software from Apple, Avid, Adobe, Autodesk, and many more.

** Pricing is for US only. International pricing will vary. Please contact a local AJA Reseller for pricing details.*

ioXT

Professional connectivity

Io XT can handle whatever equipment you are working with. With a full compliment of 3G/HD/SD-SDI and HDMI I/O, HD/SD analog video output, reference and LTC inputs, and digital and analog audio, Io XT opens up new possibilities for what can be considered a professional editing system. No longer confined to deskside tower systems, the combination of Io XT and any Thunderbolt™-enabled computer has all the capability and connectivity of a larger system but in a more portable size.

Portable

The latest generation computers feature powerful Thunderbolt interfaces, offering a mind-blowing 10Gbps available bandwidth. Taking advantage of this new interface, Io XT is the ideal portable companion for lightning-fast video capture and playback for all post production and on-set applications.

Compact, portable and powerful, Io XT is loaded with high-end features including 3G/Dual Link/HD/SD-SDI, Component Analog and HDMI connectivity, to bring true desktop-level power to any Thunderbolt™-enabled system with full uncompressed HD and SD 4:2:2 and 4:4:4 capable video and audio connectivity.

Flexible

Io XT connects to your computer with a single Thunderbolt cable and provides a second Thunderbolt connector for daisy-chaining other devices, such as storage or displays, making it perfect for use on set, or in the edit suite.

Disconnecting a device in the middle of a Thunderbolt chain will disconnect all devices that come after it. On some jobs, the drive array may be moved frequently, so it would be best to have that at the end of the chain, while other times it may be a monitor that is being removed periodically. Io XT's dual Thunderbolt ports ensure that no matter what configuration you need, the system can continue to operate without interruption.

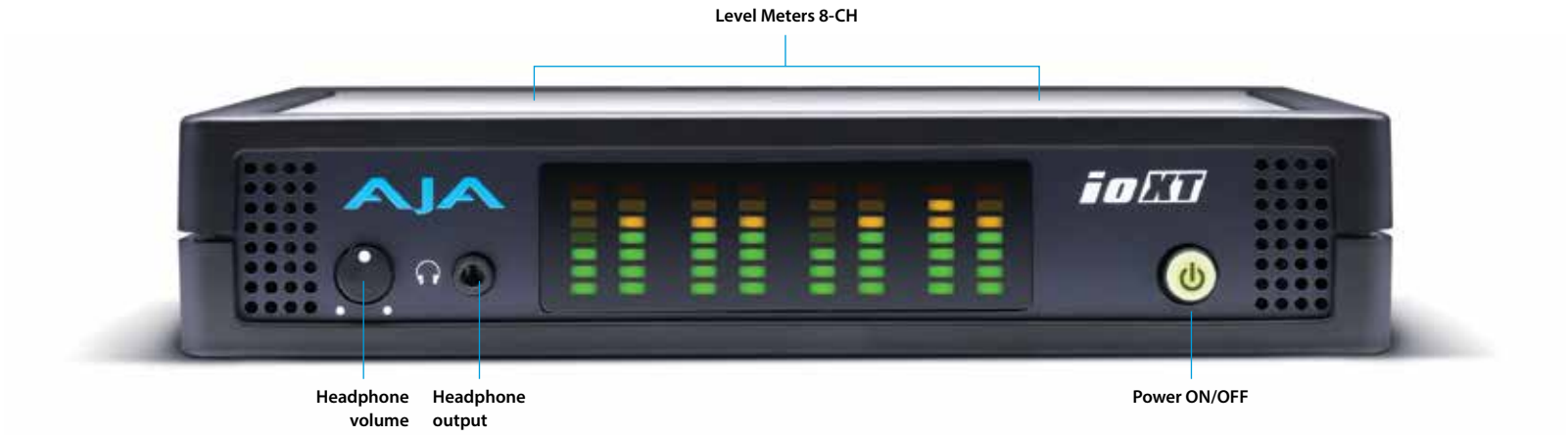
High Quality

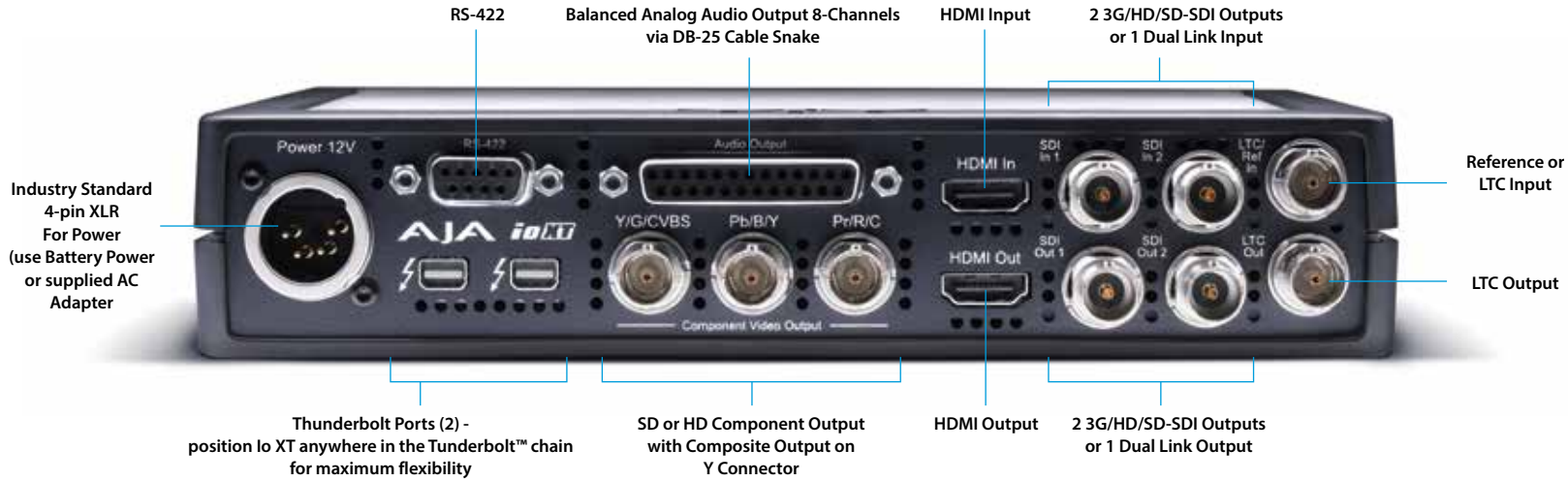
Io XT utilizes AJA's high-quality up/down/cross-conversion hardware, the same found in our flagship FS2 converter. Conversion can be done either on capture or on output. On capture, this allows you to take mismatched source media and bring it all to a common resolution so individual shots don't have to be scaled in the edit.

Likewise, Io XT can perform conversions during output to adapt to different monitoring or layoff configurations without having to change the native editorial timeline.

Uniquely, the Io XT can cross-convert 720p 23.98 to 1080PsF 23.98, which is particularly valuable in today's multi-format HD post environment.

Connections




RS-422
Balanced Analog Audio Output 8-Channels via DB-25 Cable Snake
HDMI Input
2 3G/HD/SD-SDI Outputs or 1 Dual Link Input
Industry Standard 4-pin XLR For Power (use Battery Power or supplied AC Adapter
Reference or LTC Input
LTC Output
Thunderbolt Ports (2) - position Io XT anywhere in the Tunderbolt™ chain for maximum flexibility
SD or HD Component Output with Composite Output on Y Connector
HDMI Output
2 3G/HD/SD-SDI Outputs or 1 Dual Link Output

Click here For the most recent product specifications visit www.aja.com/en/products/io-xt/#techspecs

ioXT

AJA Io XT Fuels Live Broadcast and Post for Action Sports Productions

"AJA's Io XT is absolutely a key component to having a successful workflow."

Action Sports Productions (ASP) has specialized in live broadcast and post production services for action sports, music, and entertainment for over twelve years. Based in Orange County, CA, ASP delivers live HD webcasts for the world's biggest events in surfing, skateboarding, motocross, and much more.

After experiencing repeated failures and frustrations with his old workflow, ASP founder Jay Johnson began looking for an effective Mac-based broadcast solution. Jay found ToolsOnAir, a workflow provider offering efficient and low-cost Mac-based broadcast production suites, including tools for video, audio, graphics, automation, and asset management. ToolsOnAir features AJA's Io XT in its workflow packages to take advantage of Apple's powerful Thunderbolt technology, swiftly passing video between Macs and external devices.

ASP's workflow setup includes 3 Mac Minis and 2 Io XTs. One Io XT passes video from the first Mac Mini running just:live, ToolsOnAir's live production management tool, to the second Mac Mini, equipped with a recording device. Then a second Io XT takes data from that Mac Mini to a third, where ASP uses Apple Final Cut and Adobe Premiere Pro to edit.

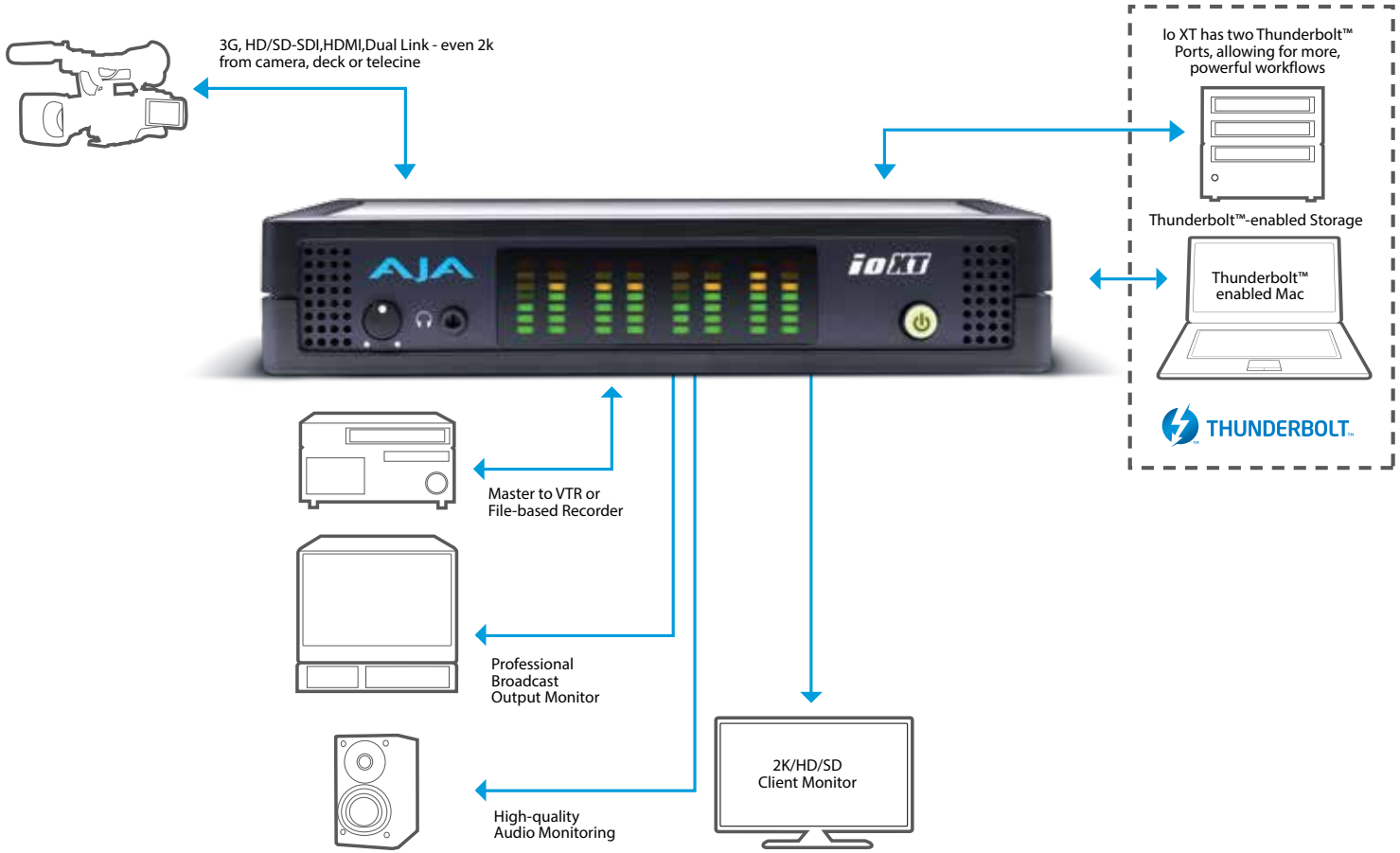
"I work in very challenging environments, so to have stability in my workflow is key," said Jay. "I'm not in a studio, I'm out hanging from scaffolding 2 miles over the ocean - but my mobile units still need to deliver the highest quality content. These surfing competitions are a major production along the lines of an NFL game - very high-end edits, multiple camera shoots, HD coverage - and I need reliable tools. AJA's Io XT is absolutely a key component to having a successful workflow."

ASP's most recent surfing project was broadcasting Nike's NSSA (National Scholastic Surfing Association) Championships in Huntington Beach, CA. "With the new workflow we were able to successfully produce multiple webcasts for the event, with absolutely no issues," said Jay. "The incredible throughput of Thunderbolt paired with these reliable tools is really the only way this could all be possible."

View Online

Workflow

Thunderbolt™-enabled workflow



Connect your digital sources via SD/HD-SDI or HDMI for capture and editing via a wide variety of formats.
Master to any Digital or Analog device through high-quality professional SDI, HDMI or Component outputs.

Tech Specs

Video Formats

- 525i 29.97
- 525i 23.98*
- 625i 25
- 720p 23.98*, 24 *, 25 *, 29.97*, 30 *, 50, 59.94, 60
- 1080i 25, 29.97, 30
- 1080PsF 23.98, 24, 25, 29.97, 30
- 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 2Kx1080p 23.98, 24, 25
- 2Kx1080PsF 23.98, 24, 25

* These formats are dependent on specific software functionality and are not normal 'over-the-wire' formats.

Software-dependent Formats

These formats are dependent on specific software functionality and are not normal 'over-the-wire' formats.

- 720P 23.98, 24 , 25 , 29.97, 30

Video Input

- 3G/SD/HD SDI, SMPTE-259/292/296/424, 10-bits
- Single Link 4:2:2 or 4:4:4, (1 x BNC)
- Dual Link HD 4:4:4, (2 x BNC)
- HDMI v1.3
- 1D LUT Support (Mac and PC)

Video Output Digital

- 3G/SD/HD SDI, SMPTE-259/292/296/424
- Single Link 4:2:2 or 4:4:4 (1 x BNC)
- Dual Link HD 4:4:4, (2 x BNC)
- HDMI v1.4, 30/36 bits/pixel, RGB or YUV, 2.25Gbps

Video Output Analog

- Composite/S-Video (Y/C) (1 x BNC/2x BNC+adapter)
- NTSC, NTSCJ, PAL
- Component (3 x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.0 MHz Y Frequency Response
- +/- .2 dB to 1 MHz C Frequency Response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain
- <1 ns Y/C delay inequity

Audio Input Digital

- 16-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

Audio Output Digital

- 16-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

Audio Output Analog

- 8-channel, 24-bit D/A analog audio, 48kHz sample rate, balanced (via 8 x XLR on DB-25 breakout cable)
- +24 dBu Full Scale Digital (0 dBFS)
- +/- 0.2 dB 20Hz to 20kHz Frequency Response

Downstream Keyer

- Supports graphics with alpha channel over video, matte or framebuffer, or framebuffer content over incoming video or matte.

Up-Conversion

- Hardware 10-bit
- **Anamorphic:** full-screen
- **Pillar box 4:3:** results in a 4:3 image in center of screen with black sidebars
- **Zoom 14:9:** results in a 4:3 image zoomed slightly to fill a 14:9 image with black side bars
- **Zoom Letterbox:** results in image zoomed to fill full screen
- **Zoom Wide:** results in a combination of zoom and horizontal stretch to fill a 16:9 screen; this setting can introduce a small aspect ratio change

Down-Conversion

- Hardware 10-bit
- **Anamorphic:** full-screen
- **Letterbox:** image is reduced with black top and bottom added to image area with the aspect ratio preserved
- **Crop:** image is cropped to fit new screen size

Cross-Conversion

Hardware 10-bit
- 1080i to 720p
- 720p to 1080i
- 720p to 1080PsF

Physical

- Power: 10-20V, 18-22W
- Interface: Thunderbolt x 2

SD to SD Aspect Ratio Conversion

- **Letterbox:** This transforms SD anamorphic material to a letterboxed image
- **H Crop:** Will produce a horizontally stretched effect on the image; transforms anamorphic SD to full frame
- **SD Pillarbox:** Will produce an image in the center of the screen with black borders on the left and right sides and an anamorphized image in the center
- **V Crop:** Will transform SD letterbox material to an

Reference Input or LTC Input

- 1 x BNC assignable to Reference video or LTC input

Reference:
- Analog Color Black (1V) or Composite Sync (2 or 4V)
- Non-terminating

Machine Control

- RS-422, Sony 9-pin protocol (via breakout cable or optional K3G-Box)
- 9-pin D-connector pinout is as follows:

1	GND
2	RX-
3	TX+
4	GND
5	No Connection
6	GND
7	RX+
8	TX-
9	GND
Shell	GND

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Io EXPRESS

Only **$995** US MSRP*

Find a Reseller

Io Express delivers compact, powerful I/O for Mac or Windows, laptop or desktop.

Cross-Platform Monitoring and Mastering

Bring the power of desktop I/O anywhere you go with Io Express.

Io Express is the perfect Mac or PC interface for anyone who needs a quality portable monitoring and mastering solution when working with Final Cut Pro X, Avid Media Composer/Symphony/Newscutter, Adobe Creative Suite, and more.

Featuring full 10-bit, broadcast-quality HD to SD hardware down-conversion and automatic HD/SD 12-bit component analog output, Io Express offers conversion flexibility all the time - during ingest or playback. If you work with a wide variety of formats, frame rates and video/audio sources, Io Express provides the connectivity you need. With its small footprint it offers big features, like 10 or 8-bit uncompressed video, HDMI I/O, HD/SD-SDI I/O with 8 channels of embedded audio, analog component video (SD/HD) or composite output, 2-channel unbalanced audio output, and broadcast quality hardware-based down-conversion for flexible post production. The HDMI I/O is v1.3a at 30 bits per pixel, providing ideal support for the very latest 10-bit monitors.

Io Express integrates with other equipment and software easily, regardless of platform. The same Io Express unit can be used with PC or Mac, desktop or laptop - giving users the flexibilty to choose how they want to work in each scenario. A rear panel PCIe connector enables use with laptops via an ExpressCard, or with a Mac Pro or Windows workstation via a PCIe card.

Regardless of your software of choice; from Apple Final Cut Pro X, Avid Media Composer, Newscutter or Symphony, to Adobe Creative Suite, Io Express is the ideal cross-platform solution for uncompressed capture and file-based support.

** Pricing is for US only. International pricing will vary. Please contact a local AJA Reseller for pricing details.*

Io EXPRESS

Powerful connectivity

Io Express provides a wide variety of formats, frame rates and video/audio sources for the connectivity you need. For digital video, Io Express features HDMI 1.3a I/O plus 3G/HD/SD-SDI I/O. In addition there are connections for Genlock or LTC input and a loop-through output, and component SD/HD analog video output. The high-quality deep color HDMI input and output provides complete color representation when you need it, while allowing you to interface with HDMI camcorders and HD monitors. Io Express also offers support for both 8-channel HDMI and SDI embedded digital audio or 2 channels of unbalanced analog audio via two RCA connectors. For multi-channel audio mastering, the 8-channel SDI embedded 24-bit 48kHz audio provides pristine quality.

Software compatibility

Io Express gives creative professionals the freedom to work with the software of their choice. Just some of the supported applications include:

Mac OSX: Apple Final Cut Pro X, Avid Media Composer, Adobe Premiere Pro*, Adobe After Effects*, Adobe Photoshop* and more.

Windows 7: Adobe Premiere Pro*, Avid Media Composer, Adobe After Effects*, CineForm New 3D, Adobe Photoshop*, CineForm Neo HD, Sony Vegas, Eyeon Fusion 64 bit, Autodesk Combustion

**via AJA plug-in*

Professional Connectivity

Many situations require the editing system to be locked in sync with other devices. Io Express can accept a reference signal, which ensures it is locked to any necessary devices for the best quality capture and output. This reference signal can then be passed on to other devices.

Users can select whether timecode is read off embedded signals or from an external input so that the proper timecode is always associated with any captured clips.

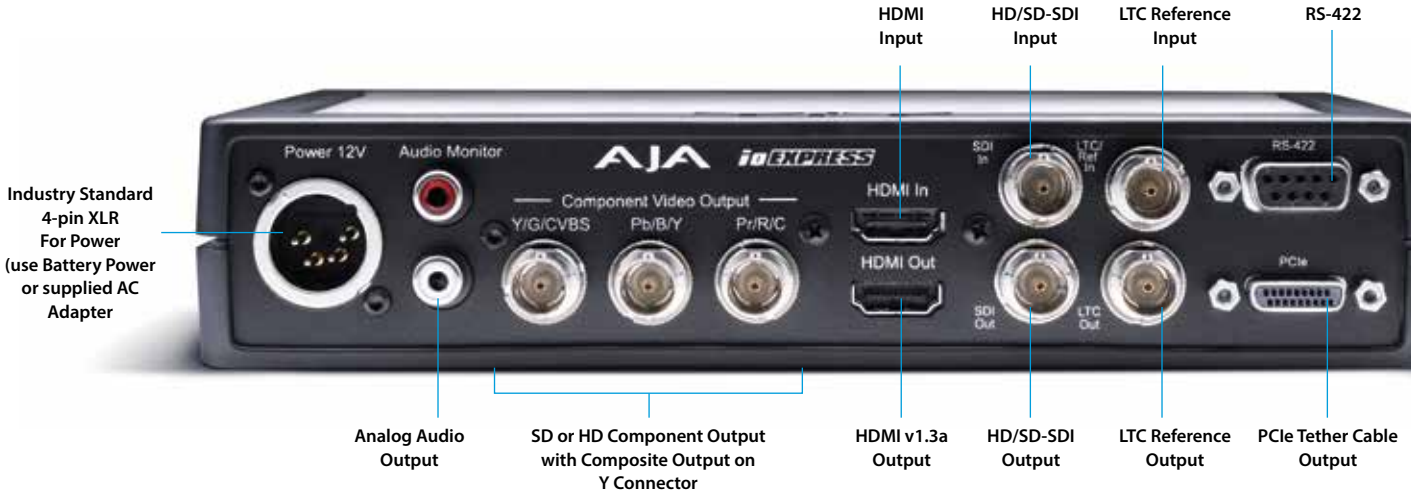
Cross-platform flexibility

However you choose to work, PC or Mac, laptop or desktop, Io Express can integrate seamlessly with your workflow.

The same Io Express unit can be used with PC or Mac, desktop or laptop - giving users the flexibilty to choose how they want to work in each scenario. A rear panel PCIe connector enables use with laptops via an ExpressCard, or with a Mac Pro or Windows workstation via a PCIe card.

With the ability to rack mount two Io Express units in a single 1RU space, you can have a secure setup while still having the mobility to change locations quickly.

Connections



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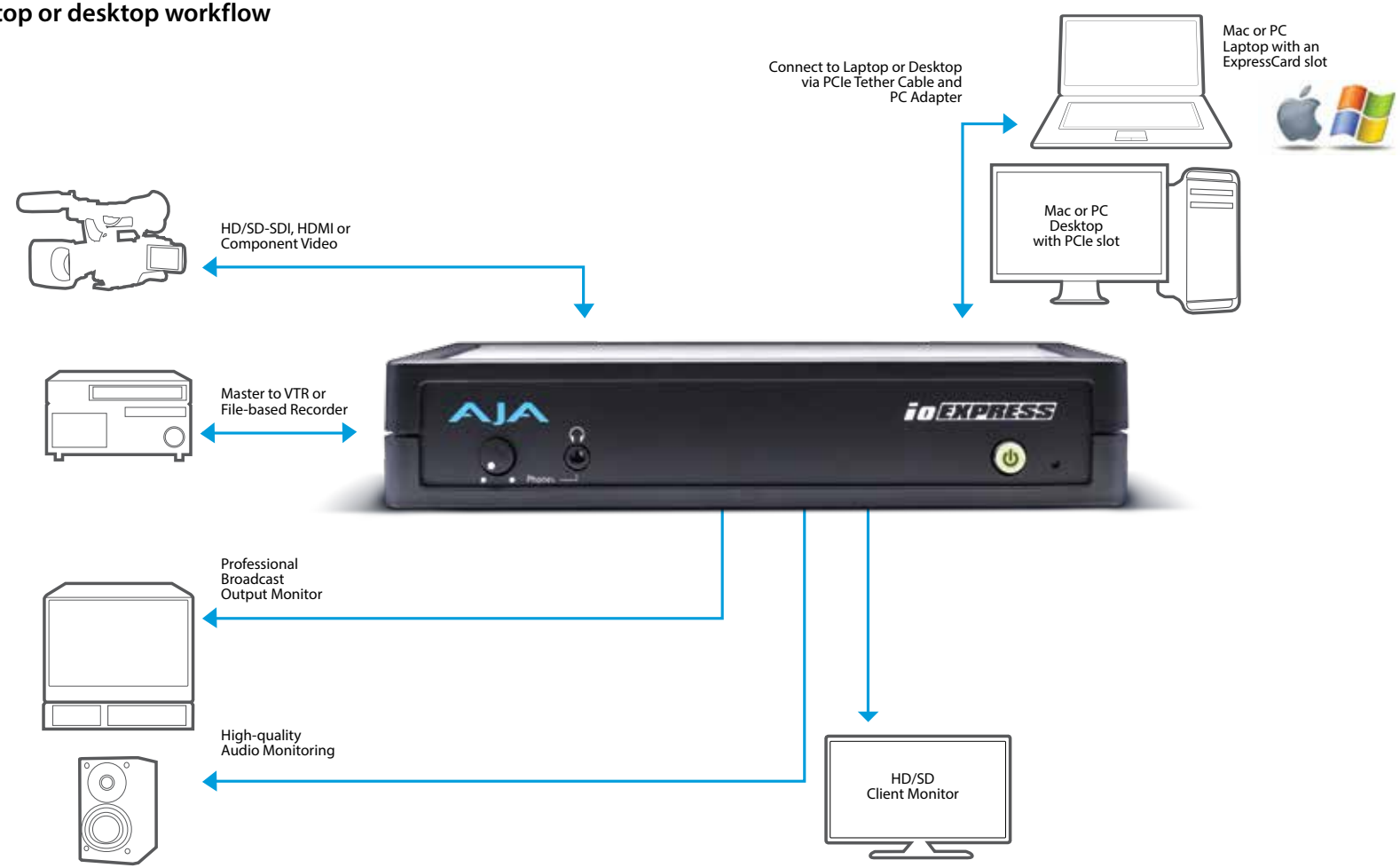
Workflow

Cross-platform, laptop or desktop workflow



Connect your digital sources via SD/HD-SDI or HDMI for capture and editing via a wide variety of formats.
Master to any Digital or Analog device through high-quality professional SDI, HDMI or Component outputs.

ioEXPRESS

Tech Specs

Video Formats

- 525i 29.97
- 625i 25
- 720p 50, 59.94, 60
- 1080i 25, 29.97, 30
- 1080PsF 23.98, 24
- 1080p 23.98, 24, 25, 29.97, 30

Video Input

- SD/HD SDI, SMPTE-259/292/296/424, 8- or 10-bit
- Single Link 4:2:2 (1 x BNC)
- HDMI v1.3 30 bits/pixel, RGB or YUV, 2.25 Gbps, SD, HD, 1080p-50/60

Video Output Digital

- SD/HD SDI, SMPTE-259/292/296/424, 8- or 10-bit
- Single Link 4:2:2 (1 x BNC)
- HDMI v1.3 30 bits/pixel, RGB or YUV, 2.25 Gbps, SD, HD, 1080p-50/60

Video Output Analog

- Composite/S-Video (Y/C) (1 x BNC/2x BNC+adapter)
- NTSC, NTSCJ, PAL
- Component (3 x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.0 MHz Y Frequency Response
- +/- .2 dB to 1 MHz C Frequency Response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain
- <1 ns Y/C delay inequity

Audio Input Digital

- 8-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

Audio Output Digital

- 8-channel, 24-bit SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous

Audio Output Analog

- 2-channel 24-bit unbalanced audio (via RCA jack)

Reference Input or LTC Input

- 1 x BNC assignable to Reference video or LTC input

Reference:

- Analog Color Black (1V) or Composite Sync (2 or 4V) Non-terminating

Machine Control

- RS-422, Sony 9-pin protocol
- 9-pin D-connector pinout is as follows:

1	GND
2	RX-
3	TX+
4	GND
5	No Connection
6	GND
7	RX+
8	TX-
9	GND
Shell	GND

Physical

- Power: 12-18V, 11-13W
- Interface: PCI Express x1
- Interface: ExpressCard/34

Click here For the most recent product specifications visit www.aja.com/en/products/io-express/#techspecs

3-year warranty

AJA Video warrants that Io products will be free from defects in materials and workmanship for a period of three years from the date of purchase.

About AJA Video Systems, Inc.

Since 1993, AJA Video has been a leading manufacturer of video interface and conversion solutions, bringing high-quality, cost-effective digital video products to the professional, broadcast and post-production markets. AJA products are designed and manufactured at our facilities in Grass Valley, California, and sold through an extensive sales channel of resellers and systems integrators around the world. For further information, please see our website at **www.aja.com**

Because it matters.®

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